

REMARKS

In the Final Office Action:

- the drawings received on February 8, 2006 were deemed acceptable;
- paragraph [0057] of the disclosure was objected to as being unclear;
- claim 1 was objected to for failing to set forth a plurality of elements or steps separated by line indentation;
- claim 1 was objected to for being unclear in reciting a “toggle-like” action;
- claim 37 was objected to as being awkward and confusing in reciting “to produce a swaged region of high gripping pressure of a portion of said cylindrical interior wall against said tube end outer surface”;
- claim 37 was provisionally rejected for double patenting over claims 22 and 28 of copending application Serial No. 10/374,026; and
- claims 1 and 37 were each rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,215,457 to Teeters in view of U.S. Patent No. 2,171,217 to Kreidel or U.S. Patent No. 2,230,116 to Kreidel.

Paragraph [0057] of the disclosure has been amended to overcome the objection.

Claim 1 has been canceled without prejudice to further prosecution, thus mooting the objections and rejections in the present application regarding that claim. Applicants do not acquiesce to the rejection of claim 1 or the objection to the language “toggle like”.

Claim 37 has been amended to recite “a swaged region is produced between said cylindrical interior wall and said tube end outer surface” to overcome the objection regarding that claim.

Serial No. 10/605,348
Examiner: James M. Hewitt
Art Unit: 3679
September 15, 2006
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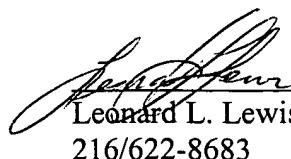
Claim 37 has been provisionally rejected for double patenting over claims 22 and 28 of copending application Serial No. 10/374,026, issued as patent number 7,100,949. If the Examiner maintains the double patenting rejection of claim 37 as amended herein, the applicants will submit a terminal disclaimer to overcome that rejection.

That leaves the rejection of claim 37 as being unpatentable over Teeters '457 in view of Kreidel '217 or Kreidel '116. The applicants respectfully submit that no art of record discloses or suggests a second (rear) ferrule that is case hardened about its entire surface which, upon pull-up of the fitting, has a rear portion radially spaced from the tube and also forms a convex portion in a cylindrical interior axially spaced from said forward edge. This inventive concept is dramatically shown, for example, in the finite element analysis of Fig. 28. Particularly concerning Teeters '457, Kreidel '217 and Kreidel '116, they do not teach a convex portion spaced axially from the forward edge.

Moreover, there is no suggestion or motivation in the art for the proposed combination of Teeters '457 with Kreidel '217 or Kreidel '116 to produce a convex portion in a cylindrical interior wall of a case hardened ferrule. It is important to note the Applicants are not simply claiming a case hardened back ferrule. Back ferrules have been partially and fully case hardened for decades. But, what Applicants have discovered and to their knowledge has not been done before, is a back ferrule that not only is fully case hardened but that upon pull-up has a rear portion of the cylindrical interior wall to be spaced from the tube end surface and also deforms to form a convex portion of the cylindrical interior wall axially spaced from the forward edge. Teeters is not case hardened and does not deform to form a convex portion of the interior wall. The Teeters back ferrule in cross-sectional profile appears to substantially maintain its shape. If anything, the interior wall may be somewhat concave. The present application is believed to be in proper condition for allowance, and favorable action is requested.

Respectfully Submitted,

Date: September 15, 2006



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216/622-8683